

**GUJARAT UNIVERSITY**  
**MSc Semester I and II Organic Chemistry Practicals**  
**Revised Syllabus**  
**Design and Structure of Choice Based Credit System**  
**(Effective from June 2023)**

**CHE 405 PR ORGANIC CHEMISTRY**

**(Minimum 8)**

- **One step preparation of organic compounds** and study of principle, general reaction mechanism, mole ratio calculation, purification, M.P/B.P
- **Distribution of Marks as per university exam:**  
Principle and reaction mechanism (05 marks), Mole ratio and other calculation (05 marks), Crude and Crystal (10 marks), Purification & M.P/B.P (05 marks), Journal (05 Marks), and Viva (05 marks): Total 35 marks.

**List of preparation**

- **Nitration**
  1. *m*-dinitro benzene from nitro benzene
  2. *p*-Nitro acetanilide from Acetanilide
- **Hydrolysis**
  3. *p*-nitroaniline from *p*-nitro acetanilide.
- **Reduction**
  4. Preparation of *m*-nitro aniline from *m*-dinitro benzene.
- **Acylation**
  5. Acetanilide from aniline.
- **Bromination**
  6. 2,4,6-tribromo aniline from aniline.
- **Oxidation**
  7. Preparation of Anthraquinone
- **Condensation reaction.**
  8. Preparation of 7-hydroxy 4-methylcoumarin.
- **Diazotization reaction**
  9. Preparation methyl orange.
- **Polymerization**
  10. Preparation of Bakelite from Phenol.

References Books.

1. *A text book of practical organic chemistry – A. I. Vogel*
2. *Practical organic Chemistry – Mann and Saunders*

## M.Sc.-II CHE 411 PR ORGANIC CHEMISTRY

(Minimum 9)

- One step preparation of organic compounds and study of general reaction, mechanism, mole ratio calculation, purification, IR and <sup>1</sup>H NMR (Theoretical).
- Distribution of Marks as per university exam:  
Principle and reaction mechanism (05 marks), Mole ratio and other calculation (05 marks), Crude and Crystal (10 marks), Spectral data (IR & <sup>1</sup>H NMR) (5 marks), Journal (05 marks) and Viva (05 marks), Total 35 marks.

### List of Preparations

- **Sandmeyer reaction:**
  1. Preparation of p-iodo nitro benzene.
  2. Preparation of phenylazo-2-naphthol from aniline & 2-Naphthol
- **Hoffman-Bromide reaction**
  3. Preparation of Anthranilic acid
- **Cannizzaro reaction**
  4. Preparation of Benzoic acid.
- **Condensation reaction:**
  5. Preparation of Dibenzalacetone.
- **Dyes**
  6. Preparation of Methyl red.
- **Fischer Indole synthesis**
  7. 2-phenyl indole.
- **Reimer-Tiemann reaction:**
  8. Preparation of 2-hydroxy naphthaldehyde.
- **Skraup synthesis:**
  9. Preparation of quinoline.
- **Green reaction:**
  10. Preparation of p-bromo acetanilide from acetanilide.

### References Books.

1. *A textbook of practical organic chemistry – A. I. Vogel*
2. *Practical organic Chemistry – Mann and Saunders*